



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,230	01/22/2002	Shinichi Kawamura	218335US0CONT	8868

22850 7590 12/12/2002

OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC  
FOURTH FLOOR  
1755 JEFFERSON DAVIS HIGHWAY  
ARLINGTON, VA 22202

EXAMINER

RODEE, CHRISTOPHER D

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 12/12/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/051,230

Applicant(s)

KAWAMURA ET AL.

Examiner

Christopher D RoDee

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 1-16, 21, 24-30, 34, 36, 40 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-20, 22, 23, 31-33, 35, 37-39 and 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of group II and the structural units having charge transportability as those of polycarbonate #1 (p. 90) in Paper No. 3 is acknowledged. The restriction and election remain in effect for the reasons given in the prior Office actions.

The requirement is still deemed proper and is maintained as FINAL.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 37-39 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear in claim 37 as amended what a "quenching unit" defines. The Examiner has carefully reviewed the specification but is unable to find a disclosure of the function of a quenching unit or what is "quenched" by the unit. If there is guidance as to what is included or excluded within the scope of "quenching unit" applicants are asked to refer the Examiner to the appropriate portions of the specification.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 1756

Claims 17-20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuno *et al.* in US Patent 5,871,876 in view of Tanaka *et al.* in US Patent 5,976,746.

Claims 31-33, 35, 37-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuno *et al.* in US Patent 5,871,876 in view of Tanaka *et al.* in US Patent 5,976,746 as applied to claims 17-20, 22, and 23 above, and further in view of common knowledge in the art.

These rejections were applied in the prior Office actions. Applicants traverse these rejection based on the exemplification of Ikuno's units (I-a) that are different from those claimed as units (2). Further, the rejection is traversed based on the evidence in the specification. Specifically applicants rely on Comparative Examples 1 and 2 as pertinent to Ikuno while Examples 2-1 through 2-4 are pertinent to the claimed invention. See the results presented in Table 2.

The Examiner has reviewed Ikuno and the supporting references in detail and agrees with applicants that there is no exemplification of the claimed unit (2). However, Ikuno provides guidance to arrive at the claimed unit (2). Ikuno teaches a polycarbonate given by the formula (I) (cols. 3 and 37) having "j" units where the "X" unit may be a bivalent group given by the formula (Ia), where "Y" is oxygen and the substituting "R" groups may be alkyl or aryl. Specific "j" units are derived from monomers such as 4,4'-dihydroxydiphenoxide (col. 6, l. 27). The reference clearly suggests the aryl- or alkyl- substituted bisphenoloxide units for formula X.

A reference is not limited to its exemplifications but is relevant for all it teaches. *In re Heck*, 216 USPQ 1038. The reference suggests a plurality of species meeting the requirements of the formula (2) for the reasons given above and in the prior Office actions.

Note that the election of species did not limit the formula (2) to the specific formula of formula on p. 90. The election required identification of a charge transport unit, which applicant

Art Unit: 1756

elected as that of formula on p. 90. Applicants do not traverse the Examiner's holding that the Ikuno reference discloses and/or suggests a structural unit with charge transporting properties as elected.

With respect to the evidence of record, the Examiner agrees that the specific polymer given by formula on p. 90 gives an unexpected improvement in abrasion as compared to the photoconductors with the comparative polymers. If the claims were limited to the formula on p. 90 the Examiner would agree that the claims are allowable over prior art.

However, the claims as considered for the election of species are not limited to the specific polycarbonate of the formula on p. 90. The claims in light of the election permit any amounts of the units within the scope of the claims, any units with the formula (2) and the specific structural unit having charge transporting properties as given by the formula on p. 90. The evidence in the specification is limited to a specific amount of the two components: 40 or 42 mol % of the charge transporting structural unit and 58 or 60 mol % of the unit given by the formula (2) (see Resins 1, 3, and 4; pp. 90, 95, and 98). The instant claims permit any amount of the corresponding unit greater than 5 wt %. The scope of the evidence is clearly not commensurate in scope with the claims. There is no reason to believe nor has any been advanced by applicants that the improvement in abrasion would be obtained for the full scope of the claims. This scope includes a 95/5 wt % ratio of either unit to the other or as little as 5 wt % of each unit and 90 wt % of other unspecified units. There is no indication that the same properties as shown in Table 2 would be obtained for all possible monomer combinations, particularly where significant amounts of non-specified components can be present. "Objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support." *In re Clemens*, 206 USPQ 289, 296 (CCPA 1980). Because the evidence is not commensurate in scope with the claims and because the claims appear to

Art Unit: 1756

permit the inclusion of units in the polymer that could substantially influence the abrasion properties of the photoconductor the rejection is maintained.

Claims 17-20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai *et al.* in US Patent 5,840,454.

Claims 31-33, 35, 37-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai *et al.* in US Patent 5,840,454 as applied to claims 17-20, 22, and 23 above, and further in view of common knowledge in the art.

These rejections are traversed for reasons substantially similar to those given for the combinations including Ikuno. Specifically, applicants traverse these rejections because there are a wide variety of phenolic monomers disclosed including many outside the scope of the claims. Further, the rejection is traversed based on the evidence in the specification. Specifically applicants rely on Comparative Examples 1 and 2 as pertinent to Ikuno while Examples 2-1 through 2-4 are pertinent to the claimed invention.

The Examiner will maintain the rejection because a preferred compound of the formula (II) is 4,4'-dihydroxy-3,3'-dimethyldiphenyl ether (col. 38, l. 41). The claimed polycarbonate has units given by the formulas (I) and (II). Although other monomers are admittedly disclosed for Nagai's formula (II), the reference clearly teaches with sufficient specificity the use of 4,4'-dihydroxy-3,3'-dimethyldiphenyl ether as a reactant to form the polymer. The fact that other monomers are disclosed does not lessen the fact that 4,4'-dihydroxy-3,3'-dimethyldiphenyl ether is identified specifically by name and, thus, the elected invention includes other units suggested by the reference. Specifically, the reference suggests units of the formula (II) where X is (d), R<sup>2</sup> and R<sup>3</sup> are alkyl or aryl, and Y is oxygen. Note that the election of species did not limit the formula (2) to the specific formula of formula on p. 90. The election required identification of a

Art Unit: 1756

charge transport unit, which applicant elected as that of formula on p. 90. Applicants do not traverse the Examiner's holding that the Nagai reference discloses and/or suggests a structural unit with charge transporting properties as elected.

With respect to the evidence of record, the Examiner agrees that the specific polymer given by formula on p. 90 gives an unexpected improvement in abrasion as compared to the photoconductors with the comparative polymers. If the claims were limited to the formula on p. 90 including the material amounts for that formula the Examiner would agree that the claims are allowable over prior art.

However, the claims as considered for the election of species are not limited to the specific polycarbonate of the formula on p. 90. The claims in light of the election permit any amounts of the units within the scope of the claims, any units with the formula (2) and the specific structural unit having charge transporting properties as given by the formula on p. 90. The discussion above concerning the insufficiency of the evidence is relied upon here because it is similarly applicable.

The rejection is maintained.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

Art Unit: 1756

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D RoDee whose telephone number is 703 308-2465. The examiner can normally be reached on most weekdays from 6 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703 308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

cdr  
December 10, 2002

  
CHRISTOPHER RODEE  
PRIMARY EXAMINER